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10/586,373	07/14/2006	Max Deffenbaugh	2004UR007	4094

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EXAMINER
GUILL, RUSSELL L

ART UNIT	PAPER NUMBER
2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,373	DEFFENBAUGH ET AL.	
	Examiner	Art Unit	
	Russ Guill	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☒ Claim(s) *1,4,8,10,17 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/14/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 23 have been examined. Claims 1 – 23 have been rejected.

2. The Examiner would like to thank the Applicant for the carefully prepared claims, which have minimal antecedent basis issues. The clarity of the claims was useful to expedite the examination process.

Claim Objections

3. Claim 1 is objected to because of the following informalities: steps (d) and (e) refer to "the partial outline of the composite sedimentary body", but step (a) defines, "at least a partial outline of the composite sedimentary body". Reference to the previous limitation should remain consistent to avoid any possible confusion or antecedent issues.

4. Claim 10 is objected to because of the following informalities: steps (e), (f) and (g) refer to "the partial outline of the composite sedimentary body", but step (a) defines, "at least a partial outline of the composite sedimentary body". Reference to the previous limitation should remain consistent to avoid any possible confusion or antecedent issues.

5. Claim 17 is objected to because of the following informalities: steps (e), (f) and (g) refer to "the partial outline of the composite sedimentary body", but step (a) defines, "at least a partial outline of the composite sedimentary body". Reference to the previous limitation should remain consistent to avoid any possible confusion or antecedent issues.

6. Claim 4 is objected to because of the following informalities: In line 7, the claim has an extraneous deleted letter "a". Appropriate correction is required.

7. Claim 8 is objected to because of the following informalities: The claim recites, "characterizing the properties of the fundamental bodies ***throughout*** the composite sedimentary body". The phrase appears to mean, "characterizing the properties of the fundamental bodies ***in*** the composite sedimentary body".

8. Claim 17 is objected to because of the following informalities: In step (e), the claim has an extraneous deleted letter "a". Appropriate correction is required.

9. Claim 20 is objected to because of the following informalities: in line 7, the claim recites, "a inlet", which appears to mean, "an inlet".

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

a. Claims 1 - 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

i. Regarding claim 1 and dependent claims, claim 1 recites in step (e), "repeating steps (c) through (d) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies". The term, "substantially full" is indefinite because there is no definition of "substantially full" in the specification, so the metes and bounds of the

claim cannot be determined. For the purpose of claim examination, the phrase, "is substantially full of" is interpreted as "includes". Please note that a partial outline need only be a tiny line segment, and determining how a line segment can be substantially full appears to be outside the knowledge of the ordinary artisan. Correction or amendment is required.

ii. Regarding claims 10 and dependent claims, claim 10 recites in step (g), "repeating steps (e) through (f) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies". The term, "substantially full" is indefinite because there is no definition of "substantially full" in the specification, so the metes and bounds of the claim cannot be determined. For the purpose of claim examination, the phrase, "is substantially full of" is interpreted as "includes". Please note that a partial outline need only be a tiny line segment, and determining how a line segment can be substantially full appears to be outside the knowledge of the ordinary artisan. Correction or amendment is required.

iii. Regarding claims 17 and dependent claims, claim 17 recites in step (g), "repeating steps (e) through (f) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies". The term, "substantially full" is indefinite because there is no definition of "substantially full" in the specification, so the metes and bounds of the claim cannot be determined. For the purpose of claim examination, the phrase, "is substantially full of" is interpreted as "includes". Please note that a partial outline need only be a tiny line segment, and determining how a line segment can be substantially full appears to be outside the knowledge of the ordinary artisan. Correction or amendment is required.

iv. Regarding claim 13, the claim recites in line 6, "the channel". The term appears to have insufficient antecedent support. For the purpose of claim examination, the term is interpreted as, "a channel".

v. Regarding claims 17 and dependent claims, the preamble recites a method for predicting properties of a subsurface reservoir, but the limitations of the claim do not appear to support the preamble because the limitations do not appear to predict properties of a subsurface reservoir. Correction or amendment is required.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1 – 23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

a. Regarding claims 1 and dependent claims, claim 1 appears to include abstract ideas, such as characterizing properties. Therefore, in order to be statutory, the claim must be directed to a practical application having a tangible, concrete and useful result. The claim does not appear to produce a tangible result needed to support a practical application.

b. Regarding claims 10 and dependent claims, claim 10 appears to include abstract ideas, such as characterizing properties. Therefore, in order to be statutory, the claim must be directed to a practical application having a tangible, concrete and useful result. The claim does not appear to produce a tangible result needed to support a practical application.

c. Regarding claims 17 and dependent claims, claim 17 appears to include abstract ideas, such as characterizing properties. Therefore, in order to be statutory, the claim must be directed to a practical application having a tangible, concrete and useful result. The claim does not appear to produce a tangible result needed to support a practical application.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. **Claims 1 – 4, 9 – 13, 16, 17 – 20, 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over SyvitskiDelta (J. P. M. Syvitski et al.; "Delta2: Delta Progradation and Basin Filling" art provided by the Applicant on the Information Disclosure Statement dated July 14, 2006, item 20) in view of SyvitskiSedflux (James P. M. Syvitski et al.; "2D SEDFLUX 1.0C: An Advanced Process-Response Numerical Model for the Fill of Marine Sedimentary Basins" art provided by the Applicant on the Information Disclosure Statement dated July 14, 2006, item 21).

a. The art of SyvitskiDelta is directed to a model for filling sedimentary basins (*page 839, Title and Abstract*).

b. The art of SyvitskiSedflux is directed to a model for filling sedimentary basins (*page 731, Title*).

c. The art of SyvitskiSedflux and the art of SyvitskiDelta are analogous art because they are both directed to the art of modeling sedimentary basin filling.

d. The motivation to use the art of SyvitskiSedflux with the art of SyvitskiDelta would have been the benefit recited in SyvitskiSedflux that a stratigraphic simulation model proves valuable to oil exploration and national security (*page 731, right-side column, entire column*), which would have been recognized as a benefit by the ordinary artisan. Further, the references have a common author.

e. SyvitskiDelta appears to teach:

f. Determining at least a partial outline of the composite sedimentary body (*page 841, left-side column, last paragraph, next-to-last line, "The initial basin shape"; and page 840, right-side column, last paragraph, fifth line from bottom, "The width of the basin seafloor"; and page 839, right-side column, last paragraph, "More advanced basin shapes . . ."*).

g. SyvitskiDelta does not specifically teach:

h. Characterizing properties of fundamental bodies in the composite sedimentary body;

i. Generating a fundamental body based on the characterized properties of the fundamental bodies;

j. Placing the fundamental body into the partial outline of the composite sedimentary body;

k. Repeating steps (c) through (d) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies.

l. SyvitskiSedflux appears to teach:

m. Characterizing properties of fundamental bodies in the composite sedimentary body (*page 732, right-side column, Sediment Failure, submerged density of sediment; and page 734, right-side column, first paragraph*);

n. Generating a fundamental body based on the characterized properties of the fundamental bodies (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

o. Placing the fundamental body into the partial outline of the composite sedimentary body (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

p. Repeating steps (c) through (d) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract; please note that if the first fundamental body fills that outline, then the last limitation is fulfilled on the first pass*);

q. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of SyvitskiSedflux with the art of SyvitskiDelta to produce the claimed invention.

r. Regarding **claims 2, 11, 18**:

s. SyvitskiDelta does not specifically teach:

t. wherein the properties of the fundamental bodies are characterized by a method chosen from the group consisting of: determining local inlet properties of flows which built the fundamental bodies, determining trends in the local inlet properties of the flows which built the fundamental bodies, determining statistical distributions of the local inlet properties of the flows which built the fundamental bodies, and any combination thereof.

u. SyvitskiSedflux appears to teach:

v. the properties of the fundamental bodies are characterized by a method of: determining local inlet properties of flows which built the fundamental bodies (*page 732, section "River Dynamics", Q_0 river discharge*).

w. Regarding **claims 3, 12, 19**:

x. SyvitskiDelta does not specifically teach:

y. wherein the local inlet properties are chosen from the group consisting of: flow velocity at an inlet, flow height at the inlet, suspended sediment volume within at least one grain size range at the inlet, inlet width, flow duration, inlet location, order in which the inlet is active relative to local inlets of other fundamental bodies, and any combination thereof.

z. SyvitskiSedflux appears to teach:

aa. The method of claim 2, wherein the local inlet properties are: flow velocity at an inlet (*page 732, section "River Dynamics", u_b mean river mouth flow velocity*).

bb. Regarding **claims 4, 13, 20**:

cc. SyvitskiDelta does not specifically teach:

dd. wherein the properties of the fundamental bodies comprise at least one member of the group: shapes of the fundamental bodies, sizes of the fundamental bodies, heights of the fundamental bodies, grain size distributions in at least one point within the fundamental bodies, bedding types in at least one point within the fundamental bodies, degrees of erosional scour below the fundamental bodies associated with deposition of the fundamental bodies, shape of a channel feeding sediment to an inlet, size of the channel feeding sediment to the inlet, degree of erosional scour caused by a channel feeding sediment to the inlet, at least one property of sediment which forms the channel feeding sediment to the inlet, at least one property of sediment which subsequently fills the channel feeding sediment to the inlet, and any combination thereof.

ee. SyvitskiSedflux appears to teach:

ff. The method of claim 1, wherein the properties of the fundamental bodies comprise at least one member of the group: shape of a channel feeding sediment to an inlet, size of the channel feeding sediment to the inlet (*page 732, section "River Dynamics", b_b channel width, and h_b channel depth*).

gg. Regarding **claims 9, 16, 23**:

hh. SyvitskiDelta does not specifically teach:

ii. wherein a possible range of the inlet flow properties is constrained by mathematical relationships between at least two of the local inlet properties.

jj. SyvitskiSedflux appears to teach:

kk. a possible range of the inlet flow properties is constrained by mathematical relationships between at least two of the local inlet properties (*page 737, left-side column, first paragraph, formula (1)*).

ll. Regarding **claim 10**:

mm. SyvitskiDelta appears to teach:

nn. Determining at least a partial outline of the composite sedimentary body (*page 841, left-side column, last paragraph, next-to-last line, "The initial basin shape"; and page 840, right-side column, last paragraph, fifth line from bottom, "The width of the basin seafloor"*).

oo. SyvitskiDelta does not specifically teach:

pp. determining at least a partial outline of at least one identified fundamental body within the composite sedimentary body;

qq. determining properties of at least one identified fundamental body within the composite sedimentary body;

rr. Characterizing the properties of fundamental bodies in the composite sedimentary body;

ss. Generating another fundamental body to be placed in the partial outline of the composite sedimentary body;

tt. Placing the other fundamental body into the partial outline of the composite sedimentary body;

uu. Repeating steps (e) through (f) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies.

vv. SyvitskiSedflux appears to teach:

ww. determining at least a partial outline of at least one identified fundamental body within the composite sedimentary body (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

xx. determining properties of at least one identified fundamental body within the composite sedimentary body (*page 732, right-side column, Sediment Failure, submerged density of sediment; and page 734, right-side column, first paragraph*);

yy. Characterizing the properties of fundamental bodies in the composite sedimentary body (*page 732, right-side column, Sediment Failure,*

submerged density of sediment; and page 734, right-side column, first paragraph);

zz. Generating another fundamental body to be placed in the partial outline of the composite sedimentary body (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

aaa. Placing the other fundamental body into the partial outline of the composite sedimentary body (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

bbb. Repeating steps (e) through (f) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract; please note that if the first fundamental body fills that outline, then the last limitation is fulfilled on the first pass*).

ccc. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of SyvitskiSedflux with the art of SyvitskiDelta to produce the claimed invention.

ddd. Regarding **claim 17**:

eee. SyvitskiDelta appears to teach:

fff. Determining at least a partial outline of the composite sedimentary body (*page 841, left-side column, last paragraph, next-to-last line, "The initial basin shape"; and page 840, right-side column, last paragraph, fifth line from bottom, "The width of the basin seafloor"*).

ggg. SyvitskiDelta does not specifically teach:

hhh. measuring thickness and grain size distribution at one point in at least one identified fundamental body within the partial outline of the composite sedimentary body;

iii. determining properties of the at least one identified fundamental body within the composite sedimentary body from a point measurement of thickness and grain size distribution within the at least one identified fundamental body;

jjj. Characterizing properties of fundamental bodies throughout the composite sedimentary body;

kkk. Generating another fundamental body to be placed in the partial outline of the composite sedimentary body;

lll. Placing the other fundamental body into the partial outline of the composite sedimentary body;

mmm. Repeating steps (e) through (f) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies.

nnn. SyvitskiSedflux appears to teach:

ooo. measuring thickness and grain size distribution at one point in at least one identified fundamental body within the partial outline of the composite sedimentary body (*page 734, right-side column, first paragraph*);

ppp. determining properties of the at least one identified fundamental body within the composite sedimentary body from a point measurement of thickness and grain size distribution within the at least one identified fundamental body (*page 734, right-side column, first paragraph*);

qqq. Characterizing properties of fundamental bodies throughout the composite sedimentary body (*page 732, right-side column, Sediment Failure, submerged density of sediment; and page 734, right-side column, first paragraph*);

rrr. Generating another fundamental body to be placed in the partial outline of the composite sedimentary body (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

sss. Placing the other fundamental body into the partial outline of the composite sedimentary body (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract*);

ttt. Repeating steps (e) through (f) until the partial outline of the composite sedimentary body is substantially full of fundamental bodies (*page 733, right-side column, last paragraph that starts with, "The second EARTHWORKS model . . .", and page 731, Abstract; please note that if the first fundamental body fills that outline, then the last limitation is fulfilled on the first pass*).

uuu. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of SyvitskiSedflux with the art of SyvitskiDelta to produce the claimed invention.

16. **Claims 5, 6, 7, 8, 14, 15, 21, 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over SyvitskiDelta as modified by SyvitskiSedflux as applied to claims **1 - 4, 9 - 13, 16, 17 - 20, 23** above, further in view of Endres (U.S. Patent Application Publication 2003/0216897).

a. The art of over SyvitskiDelta as modified by SyvitskiSedflux teaches a method for predicting properties of a composite sedimentary body in a subsurface reservoir as recited in claims **1 - 4, 9 - 13, 16, 17 - 20, 23** above.

b. The art of Endres is directed to modeling geologic objects in faulted formations (*Title*).

c. The art of Endres and the art of SyvitskiDelta as modified by SyvitskiSedflux are analogous art because they both contain the art of modeling geologic objects (*SyvitskiDelta, page 846, figure 1, sediment stratigraphy of Holocene seafloor is a geologic object; Endres, title*).

d. The motivation to use the art of Endres with the art of SyvitskiDelta as modified by SyvitskiSedflux would have been the benefit recited in Endres that a tool advantageously combines geophysical, geological, petrophysical and reservoir data, allowing the viewing of a true perspective of geospatial relationships (*paragraph [0011]*).

e. Regarding **claims 5, 14, 21**:

f. SyvitskiDelta as modified by SyvitskiSedflux does not specifically teach:

g. wherein the at least the partial outline of the composite sedimentary body is determined from seismic data.

h. Endres appears to teach:

i. the partial outline of a composite sedimentary body is determined from seismic data (*paragraph [0011], visualizing 3D seismic data*).

j. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Endres with the art of SyvitskiDelta as modified by SyvitskiSedflux to produce the claimed invention.

k. Regarding **claim 6**:

l. SyvitskiDelta as modified by SyvitskiSedflux does not specifically teach:

m. The method of claim 1, wherein the properties of at least one of the fundamental bodies are determined using grain size and body thickness measurements from a well sample.

n. Endres appears to teach:

o. the properties of at least one of the fundamental bodies are determined using grain size and body thickness measurements from a well sample (*paragraph [0009], shape of geological bodies from well log data*).

p. Regarding **claim 7**:

q. SyvitskiDelta as modified by SyvitskiSedflux does not specifically teach:

r. The method of claim 1, wherein the properties of at least one of the fundamental bodies are determined by using at least part of an outline form of an identified fundamental body.

s. Endres appears to teach:

t. the properties of at least one of the fundamental bodies are determined by using at least part of an outline form of an identified fundamental body (*paragraph [0011], visualizing 3D seismic data*).

u. Regarding **claim 8**:

v. SyvitskiDelta as modified by SyvitskiSedflux does not specifically teach:

w. The method of claim 1, wherein characterizing the properties of the fundamental bodies throughout the composite sedimentary body includes at least determining properties of fundamental bodies from the partial outline of the composite sedimentary body.

x. Endres appears to teach:

y. characterizing the properties of the fundamental bodies throughout the composite sedimentary body includes at least determining properties of fundamental bodies from the partial outline of the composite sedimentary body (*paragraph [0011], visualizing 3D seismic data*).

z. Regarding **claim 15**:

aa. SyvitskiDelta as modified by SyvitskiSedflux does not specifically teach:

bb. The method of claim 10, wherein the at least the partial outline of at least one identified fundamental body is determined from seismic data.

cc. Endres appears to teach:

dd. the partial outline of at least one identified fundamental body is determined from seismic data (*paragraph [0011], visualizing 3D seismic data*).

ee. Regarding **claim 22**:

ff. SyvitskiDelta as modified by SyvitskiSedflux does not specifically teach:

gg. wherein the properties of the fundamental bodies are determined by using at least the partial outline of the composite sedimentary body.

hh. Endres appears to teach:

ii. wherein the properties of the fundamental bodies are determined by using at least the partial outline of the composite sedimentary body (*paragraph [0011], visualizing 3D seismic data*).

17. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure:

a. Chris Paola, "Quantitative models of sedimentary basin filling", 2000, Sedimentology, Volume 47, Supplement 1, pages 121 – 178; teaches predicting properties of fundamental bodies in a composite sedimentary body.

b. Hennington (U.S. Patent Number 4,821,242) teaches reconstructing subsurface bodies.

c. Hoyal et al.; "Sedimentation from Jets: A Depositional Model for Clastic Deposits of all Scales and Environments", May 11, 2003, AAPG Annual Convention, nine unnumbered pages; teaches formation of fundamental bodies and composite bodies.

d. Van Wagoner et al.; "Energy Dissipation and the Fundamental Shape of Siliciclastic Sedimentary Bodies", May 14, 2003, Search and Discovery, Article #40080, nine unnumbered pages; teaches formation of fundamental bodies and composite bodies.

e. Dunn et al.; "Hierarchical, Self-Affine Fluvial Sand Body Shapes from Ancient and Modern Settings", May 11, 2003, AAPG Annual Convention, eight unnumbered pages; teaches formation of fundamental bodies and composite bodies.

f. Rudy Slingerland et al.; "Simulating Clastic Sedimentary Basins", 1994, Prentice Hall; teaches simulation of sedimentary basins.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is 571-272-7955. The examiner can normally be reached on Monday – Friday 9:30 AM – 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russ Guill
Examiner
Art Unit 2123

RG

PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100